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1646

RAW SEQUENCE LISTING

DATE: 05/13/2002

PATENT APPLICATION: US/09/589,285A

TIME: 14:59:10

Input Set : A:\09589285 CRF SEQ LIST Mar 2002 Cust No 22195.txt

Output Set: N:\CRF3\05132002\I589285A.raw

3 <110> APPLICANT: Yu et al.
 5 <120> TITLE OF INVENTION: Methods of Treatment of Immune System Related Disorders
 6 Using Neutrokine-alpha
 8 <130> FILE REFERENCE: PF343P3C4
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/589,285A
 C--> 10 <141> CURRENT FILING DATE: 2000-06-08
 10 <150> PRIOR APPLICATION NUMBER: 09/589,285
 11 <151> PRIOR FILING DATE: 2000-06-08
 13 <150> PRIOR APPLICATION NUMBER: 09/507,968
 14 <151> PRIOR FILING DATE: 2000-02-22
 16 <150> PRIOR APPLICATION NUMBER: 60/122,388
 17 <151> PRIOR FILING DATE: 1999-03-02
 19 <150> PRIOR APPLICATION NUMBER: 60/124,097
 20 <151> PRIOR FILING DATE: 1999-03-12
 22 <150> PRIOR APPLICATION NUMBER: 60/126,599
 23 <151> PRIOR FILING DATE: 1999-03-26
 25 <150> PRIOR APPLICATION NUMBER: 60/127,598
 26 <151> PRIOR FILING DATE: 1999-04-02
 28 <150> PRIOR APPLICATION NUMBER: 60/130,412
 29 <151> PRIOR FILING DATE: 1999-04-16
 31 <150> PRIOR APPLICATION NUMBER: 60/130,696
 32 <151> PRIOR FILING DATE: 1999-04-23
 34 <150> PRIOR APPLICATION NUMBER: 60/131,278
 35 <151> PRIOR FILING DATE: 1999-04-27
 37 <150> PRIOR APPLICATION NUMBER: 60/131,673
 38 <151> PRIOR FILING DATE: 1999-04-29
 40 <150> PRIOR APPLICATION NUMBER: 60/136,784
 41 <151> PRIOR FILING DATE: 1999-05-28
 43 <150> PRIOR APPLICATION NUMBER: 60/142,659
 44 <151> PRIOR FILING DATE: 1999-07-06
 46 <150> PRIOR APPLICATION NUMBER: 60/145,824
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 50 <151> PRIOR FILING DATE: 1999-11-24
 52 <150> PRIOR APPLICATION NUMBER: 60/168,624
 53 <151> PRIOR FILING DATE: 1999-12-03
 55 <150> PRIOR APPLICATION NUMBER: 60/171,108
 56 <151> PRIOR FILING DATE: 1999-12-16
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 59 <151> PRIOR FILING DATE: 1999-12-23
 61 <150> PRIOR APPLICATION NUMBER: 60/176,015
 62 <151> PRIOR FILING DATE: 2000-01-14
 64 <150> PRIOR APPLICATION NUMBER: 09/255,794

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68 <151> PRIOR FILING DATE: 1998-01-12
70 <150> PRIOR APPLICATION NUMBER: 60/036,100
71 <151> PRIOR FILING DATE: 1997-01-14
73 <150> PRIOR APPLICATION NUMBER: PCT/US96/17957
74 <151> PRIOR FILING DATE: 1996-10-25
76 <160> NUMBER OF SEQ ID NOS: 42
78 <170> SOFTWARE: PatentIn Ver. 2.1
80 <210> SEQ ID NO: 1
81 <211> LENGTH: 1100
82 <212> TYPE: DNA
83 <213> ORGANISM: Homo sapiens
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86 <221> NAME/KEY: CDS
87 <222> LOCATION: (147)..(1001)
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93 atcaacaaac acagataaca ggaaatgata cattccctgt ggtaacttat tctaaaggcc 120
95 ccaaccttca aagttcaagt agtgat atg gat gac tcc aca gaa agg gag cag 173
96 Met Asp Asp Ser Thr Glu Arg Glu Gln
97 1 5
99 tca cgc ctt act tct tgc ctt aag aaa aga gaa gaa atg aaa ctg aag 221
100 Ser Arg Leu Thr Ser Cys Leu Lys Lys Arg Glu Glu Met Lys Leu Lys
101 10 15 20 25
103 gag tgt gtt tcc atc ctc cca cgg aag gaa agc ccc tct gtc cga tcc 269
104 Glu Cys Val Ser Ile Leu Pro Arg Lys Glu Ser Pro Ser Val Arg Ser
105 30 35 40
107 tcc aaa gac gga aag ctg ctg gct gca acc ttg ctg ctg gca ctg ctg 317
108 Ser Lys Asp Gly Lys Leu Leu Ala Ala Thr Leu Leu Leu Ala Leu Leu
109 45 50 55
111 tct tgc tgc ctc acg gtg gtg tct ttc tac cag gtg gcc gcc ctg caa 365
112 Ser Cys Cys Leu Thr Val Val Ser Phe Tyr Gln Val Ala Ala Leu Gln
113 60 65 70
115 ggg gac ctg gcc agc ctc cgg gca gag ctg cag ggc cac cac gcg gag 413
116 Gly Asp Leu Ala Ser Leu Arg Ala Glu Leu Gln Gly His His Ala Glu
117 75 80 85
119 aag ctg cca gca gga gca gga gcc ccc aag gcc ggc ctg gag gaa gct 461
120 Lys Leu Pro Ala Gly Ala Gly Ala Pro Lys Ala Gly Leu Glu Glu Ala
121 90 95 100 105
123 cca gct gtc acc gcg gga ctg aaa atc ttt gaa cca cca gct cca gga 509
124 Pro Ala Val Thr Ala Gly Leu Lys Ile Phe Glu Pro Pro Ala Pro Gly
125 110 115 120
127 gaa ggc aac tcc agt cag aac agc aga aat aag cgt gcc gtt cag ggt 557
128 Glu Gly Asn Ser Ser Gln Asn Ser Arg Asn Lys Arg Ala Val Gln Gly
129 125 130 135
131 cca gaa gaa aca gtc act caa gac tgc ttg caa ctg att gca gac agt 605
132 Pro Glu Glu Thr Val Thr Gln Asp Cys Leu Gln Leu Ile Ala Asp Ser

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DATE: 05/13/2002

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Input Set : A:\09589285 CRF SEQ LIST Mar 2002 Cust No 22195.txt

Output Set: N:\CRF3\05132002\I589285A.raw

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135 gaa aca cca act ata caa aaa gga tct tac aca ttt gtt cca tgg ctt      653
136 Glu Thr Pro Thr Ile Gln Lys Gly Ser Tyr Thr Phe Val Pro Trp Leu
137          155          160          165
139 ctc agc ttt aaa agg gga agt gcc cta gaa gaa aaa gag aat aaa ata      701
140 Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu Glu Lys Glu Asn Lys Ile
141 170          175          180          185
143 ttg gtc aaa gaa act ggt tac ttt ttt ata tat ggt cag gtt tta tat      749
144 Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile Tyr Gly Gln Val Leu Tyr
145          190          195          200
147 act gat aag acc tac gcc atg gga cat cta att cag agg aag aag gtc      797
148 Thr Asp Lys Thr Tyr Ala Met Gly His Leu Ile Gln Arg Lys Lys Val
149          205          210          215
151 cat gtc ttt ggg gat gaa ttg agt ctg gtg act ttg ttt cga tgt att      845
152 His Val Phe Gly Asp Glu Leu Ser Leu Val Thr Leu Phe Arg Cys Ile
153          220          225          230
155 caa aat atg cct gaa aca cta ccc aat aat tcc tgc tat tca gct ggc      893
156 Gln Asn Met Pro Glu Thr Leu Pro Asn Asn Ser Cys Tyr Ser Ala Gly
157          235          240          245
159 att gca aaa ctg gaa gaa gga gat gaa ctc caa ctt gca ata cca aga      941
160 Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu Gln Leu Ala Ile Pro Arg
161 250          255          260          265
163 gaa aat gca caa ata tca ctg gat gga gat gtc aca ttt ttt ggt gca      989
164 Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp Val Thr Phe Phe Gly Ala
165          270          275          280
167 ttg aaa ctg ctg tgacctactt acaccatgctc tgtagctatt ttccctccctt      1041
168 Leu Lys Leu Leu
169          285
171 tctctgtacc tctaagaaga aagaatctaa ctgaaaatac caaaaaaaaa aaaaaaaaaa      1100
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175 <211> LENGTH: 285
176 <212> TYPE: PRT
177 <213> ORGANISM: human
179 <400> SEQUENCE: 2
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182 1          5          10          15
184 Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
185          20          25          30
187 Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
188          35          40          45
190 Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
191          50          55          60
193 Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
194 65          70          75          80
196 Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
197          85          90          95
199 Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
200          100          105          110
202 Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn

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DATE: 05/13/2002

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TIME: 14:59:10

Input Set : A:\09589285 CRF SEQ LIST Mar 2002 Cust No 22195.txt

Output Set: N:\CRF3\05132002\I589285A.raw

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203          115          120          125
205 Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
206          130          135          140
208 Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
209 145          150          155          160
211 Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
212          165          170          175
214 Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
215          180          185          190
217 Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
218          195          200          205
220 Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
221          210          215          220
223 Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
224 225          230          235          240
226 Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
227          245          250          255
229 Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu
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236 <211> LENGTH: 233
237 <212> TYPE: PRT
238 <213> ORGANISM: Homo sapiens
240 <400> SEQUENCE: 3
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242 1          5          10          15
244 Leu Pro Lys Lys Thr Gly Gly Pro Gln Gly Ser Arg Arg Cys Leu Phe
245          20          25          30
247 Leu Ser Leu Phe Ser Phe Leu Ile Val Ala Gly Ala Thr Thr Leu Phe
248          35          40          45
250 Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Phe Pro
251          50          55          60
253 Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser
254 65          70          75          80
256 Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro
257          85          90          95
259 Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu
260          100          105          110
262 Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser
263          115          120          125
265 Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly
266          130          135          140
268 Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala
269 145          150          155          160
271 Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro
272          165          170          175
274 Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu

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DATE: 05/13/2002

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TIME: 14:59:10


Input Set : A:\09589285 CRF SEQ LIST Mar 2002 Cust No 22195.txt

Output Set: N:\CRF3\05132002\I589285A.raw

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275          180          185          190
277 Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu
278          195          200          205
280 Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly
281          210          215          220
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288 <211> LENGTH: 205
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290 <213> ORGANISM: Homo sapiens
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296 Leu His Leu Leu Leu Leu Gly Leu Leu Leu Val Leu Leu Pro Gly Ala
297          20          25          30
299 Gln Gly Leu Pro Gly Val Gly Leu Thr Pro Ser Ala Ala Gln Thr Ala
300          35          40          45
302 Arg Gln His Pro Lys Met His Leu Ala His Ser Thr Leu Lys Pro Ala
303          50          55          60
305 Ala His Leu Ile Gly Asp Pro Ser Lys Gln Asn Ser Leu Leu Trp Arg
306 65          70          75          80
308 Ala Asn Thr Asp Arg Ala Phe Leu Gln Asp Gly Phe Ser Leu Ser Asn
309          85          90          95
311 Asn Ser Leu Leu Val Pro Thr Ser Gly Ile Tyr Phe Val Tyr Ser Gln
312          100          105          110
314 Val Val Phe Ser Gly Lys Ala Tyr Ser Pro Lys Ala Thr Ser Ser Pro
315          115          120          125
317 Leu Tyr Leu Ala His Glu Val Gln Leu Phe Ser Ser Gln Tyr Pro Phe
318          130          135          140
320 His Val Pro Leu Leu Ser Ser Gln Lys Met Val Tyr Pro Gly Leu Gln
321 145          150          155          160
323 Glu Pro Trp Leu His Ser Met Tyr His Gly Ala Ala Phe Gln Leu Thr
324          165          170          175
326 Gln Gly Asp Gln Leu Ser Thr His Thr Asp Gly Ile Pro His Leu Val
327          180          185          190
329 Leu Ser Pro Ser Thr Val Phe Phe Gly Ala Phe Ala Leu
330          195          200          205
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334 <211> LENGTH: 244
335 <212> TYPE: PRT
336 <213> ORGANISM: Homo sapiens
338 <400> SEQUENCE: 5
339 Met Gly Ala Leu Gly Leu Glu Gly Arg Gly Gly Arg Leu Gln Gly Arg
340 1          5          10          15
342 Gly Ser Leu Leu Leu Ala Val Ala Gly Ala Thr Ser Leu Val Thr Leu
343          20          25          30
345 Leu Leu Ala Val Pro Ile Thr Val Leu Ala Val Leu Ala Leu Val Pro
346          35          40          45

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 Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

DATE: 05/13/2002

PATENT APPLICATION: US/09/589,285A

TIME: 14:59:11

Input Set : A:\09589285 CRF SEQ LIST Mar 2002 Cust No 22195.txt

Output Set: N:\CRF3\05132002\I589285A.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7

L:509 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7

L:511 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7

L:512 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7

L:513 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7

L:696 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8

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L:702 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8

L:703 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8

L:704 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8

L:795 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9

L:796 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9

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L:800 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9

L:801 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9

L:1454 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35

L:1482 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36